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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): L.D. Comerford et al.
Docket No.: YO998-522
Serial No.: 09/460,913
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Group: 2654
Examiner: Abul K. Azad

I hereby certify that this paper is being deposited on this date with the U.S. Postal Service as first class mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signature: Linda M. Hanlin Date: October 21, 2003

Title: Methods and Apparatus for Contingent
Transfer and Execution of Spoken
Language Interfaces

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APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants (hereinafter "Appellants") hereby appeal the final rejection dated May 19, 2003 of claims 1-19 of the above-identified application.

REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation (IBM Corp.), as evidenced by an assignment recorded April 3, 2000 in the U.S. Patent and Trademark Office at Reel 010671, Frame 0264. The assignee IBM Corp. is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no known related appeals and interferences.

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STATUS OF CLAIMS

Claims 1-19 are pending in the present application. Claims 6, 7, 13, 14 and 19 stand finally rejected under 35 U.S.C. §102(e). Claims 1-5, 8-12 and 15-18 stand finally rejected under 35 U.S.C. §103(a). Claims 1-19 are appealed.

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the final rejection.

SUMMARY OF INVENTION

The present invention relates to “methods and apparatus for contingent transfer and execution of spoken language interfaces” (present specification; page 2, lines 24-25). Independent claim 1 specifies, in an apparatus for providing a portable spoken language interface for a user to a device in communication with the apparatus, a method for modifying a data structure containing at least one user interface data set. The method includes adding a new application to the device, generating a second user interface data set corresponding to the new application, transferring the second user interface data set from the device to the apparatus, and loading the second user interface data set into the data structure of the apparatus. The second user interface data set represents spoken language interface elements and data recognizable by the new application. Independent claims 6, 16 and 19 specify a method, apparatus and article of manufacture, respectively, for automatically providing contingent transfer and execution of one or more spoken language interfaces for a user with respect to at least one external network with which the user interacts.

A spoken language interface is defined in sets of user interface files. The user interface files are referred to as “vocabularies files, prompt files, profiles and scripts depending on the role they play in structuring the interface” (Specification; page 3, lines 4-5). As used by the present invention, the term “spoken language interface” is intended to refer to the general act of speaking to a machine, listening to a machine, and/or interacting with a machine through utterances or audible expressions, and does **not** refer to a particular lingual type (e.g., English or Spanish). The present invention provides a means by which a spoken language interface, such as a user interface data set and a dialog

manager engine capabilities of a personal speech assistant (PSA), can be managed based on certain contingencies (Specification; page 3, lines 24-26).

An important aspect of the invention is its ability to dynamically instantiate a new application and its corresponding spoken language interface (Specification; page 42, lines 5-7). It should be appreciated that the spoken language user interface is a collection of operable features that allows a user to interact with the application. For example, user utterances may operate the features of the application, e.g., by supplying a reference to one or more events to be processed by the target application (Specification; page 3, lines 5-6). The term "event" is used by the present invention in a conventional sense in the context of event handling programs. Event handling is a feature of the application. These operable features, which are built into an application and are controlled at least in part by user utterances, are to be distinguished from data on which the application program acts.

In an illustrative embodiment of the invention, as shown in FIG. 17 of the drawings, a user is assumed to have added a new speech aware application to a personal digital assistant (PDA), which is in communication with a PSA, and chooses to access that application (17000) (Specification; page 39, lines 1-2). As the application begins execution for the first time, it accesses a Voice Library (17010) provided to the PDA which recognizes the application as a new application and sends a notification to the PSA (17020) that the new application has been received (Specification; page 39, lines 4-8). The PSA, receiving the message (17030), determines that it has no user interface data structure entries corresponding to the new application (Specification; page 39, lines 9-11). The PSA, finding that the user interface files are not in place (17040), send a request to the PDA for the appropriate user interface data set corresponding to the new application (Specification; page 39, lines 14-15). On receiving the user interface data (17070), the PSA dialog manager, continuing the "hard-coded" function of adding a new application, places the name of the new application in the application list (17080), sets the user interface files of the new application as the active application files (17090), and sends a message indicating that the user may now speak to the new application (17100) (Specification; page 39, lines 20-27).

ISSUES PRESENTED FOR REVIEW

1. Whether claims 6, 7, 13, 14 and 19 are properly rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application Publication No. US 2002/0091513 A1 to Mozer et al. (hereinafter “Mozer”).

2. Whether claims 8 and 15-17 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Mozer in view of “well-known prior art.”

3. Whether claims 1-5, 9-12 and 18 are properly rejected under 35 U.S.C. §103(a) as being unpatentable over Mozer in view of “well-known prior art,” and further in view of U.S. Patent No. 6,044,347 to Abella et al. (hereinafter “Abella”).

GROUPING OF CLAIMS

Issues 1-3 above each involve a ground of rejection which Appellants contest and which applies to a group of two or more claims. With regard to these claims, claims 6, 7, 13, 14 and 19 do not stand or fall together (claims 6, 7 and 19 stand or fall together, and claims 13 and 14 are believed to be separately patentable), claims 8 and 15-17 do not stand or fall together (claims 8, 16 and 17 stand or fall together, and claim 15 is believed to be separately patentable), and claims 1-5, 9-12 and 18 do not stand or fall together (claims 1, 2 and 9 stand or fall together, claims 3-5 stand or fall together and are believed to be separately patentable, and claims 10, 11 and 12 are believed to be separately patentable).

ARGUMENT

Issue 1

A. Claims 6, 7 and 19

As was noted above, independent claims 6 and 19 specify a method and article of manufacture, respectively, for automatically providing contingent transfer and execution of one or more spoken language interfaces for a user with respect to at least one external network with which the user interacts. The method and article of manufacture further include the steps of requesting a spoken language interface data set from the external network upon discovery of the external network,

transferring the spoken language interface data set to portable spoken language interface device associated with the user, and loading the spoken language interface data set into a data structure of the device for use by the user interfacing with the external network.

With regard to claims 6 and 19, the Examiner contends that Mozer teaches “a method of automatically providing a spoken language interface for a user with respect to at least one external network with which the user interacts, wherein the user process [sic] a portable spoken language interface device having a data structure for storing one or more user interface data sets used to provide one or more spoken language interfaces” including each of the steps recited in claims 6 and 19 (final Office Action; page 2, last paragraph to page 3, paragraph 3). Appellants respectfully disagree with the contention.

Appellants submit that claims 6 and 19 are patentable over the Mozer reference. Specifically, Mozer fails to disclose a method or article of manufacture, respectively, capable of automatically providing a spoken language interface for a user with respect to at least one external network with which the user interacts, as required by the subject claims. In this regard, Appellants assert that the recognition set and weight set taught by Mozer, on page 3, paragraph 0032, are not analogous to the spoken language interface data set recited in the claimed invention and defined by the present specification. The recognition set disclosed in Mozer is merely a set of words recognized by the dedicated interface associated with the speech recognition system. While Mozer may disclose that the recognition system can select a new set of words and associated weights for recognizing a new user utterance (Mozer; page 3, paragraph 0033), Mozer fails to teach or suggest automatically providing a new spoken language interface for the user, as set forth in claims 6 and 19. Moreover, Mozer fails to teach or suggest dynamically changing an application of the speech recognition system. Rather, Mozer discloses a system that is dedicated to a single application (e.g., a compact disc changer application).

The present specification provides a clear definition of a “spoken language interface data set” as set forth in the subject claims. The specification, at least at page 3, beginning at line 3, explicitly defines a spoken language interface data set as comprising:

. . . sets of user interface files. These are referred to as vocabularies files, prompt files, profiles and scripts depending on the role they play in structuring the interface. Vocabulary files provide tables relating possible user utterances with events and data that are understood by the target application. Prompt files provide sets of standard responses that may be used by applications to prompt the user to actions or inform the user about application status. Profiles set the parameters for the operation of the PSA hardware such as the voicing parameters used by the text to speech engine. . . Scripts provide instruction programming sequences of PSA services.

It is well-settled that “[a] patentee is his own lexicographer.” *Canaan Prod., Inc. v. Edward Don & Co.*, 388 F.2d 540, 544, 156 USPQ 295, 298 (7th Cir. 1968). The Federal Circuit has reiterated this doctrine, stating that: “It is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer, . . . and thus may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings. For this reason, an analysis of the specification and prosecution history is important to proper claim construction.” *Hormone Research Foundation, Inc. v. Genetech, Inc.*, 904 F.2d 1558, 1563, 15 USPQ2d 1039, 1043 (Fed. Cir. 1990).

The recognition and weight sets disclosed in Mozer, in contrast to the claimed invention, are not used to structure a spoken language interface itself, nor are they able to define parameters of operation of the speech recognition system. Therefore, such recognition and weight sets are clearly not analogous to the spoken language interface data set recited in the claimed invention. To further highlight the differences between the two different types of data sets, from a system hierarchy standpoint, the recognition set and associated weight set taught by Mozer reside in a device/driver layer of the system, while the spoken language interface data set of the claimed invention resides in the operating system shell layer, which is a higher hierarchical layer of the system.

For at least the foregoing reasons, Appellants assert that claims 6 and 19 are patentable over the cited prior art.

Claim 7 depends from claim 6 and is therefore believed to be patentable for at least the reasons set forth above with respect to claim 6.

B. Claim 13

With regard to claim 13, this claim further defines the method of automatically providing a spoken language interface as prompting the user for information comprising a spoken utterance and “modifying at least one of a predetermined parameter of the device and an application running on the device” in response to the spoken utterance. The prior art of record fails to teach or suggest at least this feature of the claimed invention.

As per claim 13, the Examiner contends that such feature is taught by Mozer on page 3, paragraph 0029, where it states that “[t]he information presented to the user may include prompts for input to microphone 105 or application specific information.” Appellants assert that merely providing prompts for a specific application is well-known in the art. However, this is not an accurate characterization of the invention set forth in claim 13. Specifically, Mozer fails to teach or suggest that the system is capable of modifying one or more parameters of the system and/or an application running on the system in response to the user utterance, as expressly required by claim 13. While Mozer may disclose that “pattern recognition system 112 receives the recognition result and selects a new set of words and associated weight set based on this result” (Mozer; page 3, paragraph 0033), Appellants assert that merely selecting a new set of words to be recognized does not amount to modifying one or more operating parameters of the system. The pattern recognition system and related components of Mozer continue to operate in the same predefined manner.

Inasmuch as Mozer clearly fails to teach or suggest the above-noted limitations, claim 13 is believed to be independently patentable.

C. Claim 14

With regard to claim 14, this claim further defines the step of prompting the user for information as “storing one or more user experience parameters corresponding to a familiarity of the user with a predetermined procedure of the application; and selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on experience parameters, the selected prompt substantially matching the stored experience

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parameters of the user.” Appellants submit that the prior art of record clearly fails to teach or suggest at least this feature of the claimed invention.

As per claim 14, the Examiner contends that such feature is disclosed in Mozer on page 3, paragraph 0029. Appellants respectfully disagree with this contention. Mozer, on page, paragraph 0029 states that “[t]he information presented to the user may include prompts for input to microphone 105 or application specific information.” However, prompting for information corresponding to a particular application, as taught by Mozer, is not the same as providing a plurality of different prompts to the user based on an experience level of the user with the application, as required by the invention set forth in claim 14. Mozer fails to teach or suggest modifying the set of prompts presented to the user based on experience parameters, and furthermore fails to teach or suggest any means for determining and storing the familiarity of the user with the particular application, as set forth in the subject claim.

Inasmuch as Mozer clearly fails to teach or suggest the above-noted limitations, claim 14 is believed to be independently patentable.

Issue 2

Appellants hereby re-allege and incorporate by reference the arguments relating to Issue 1 above in their entirety.

A. Claims 8, 16 and 17

As was noted above, independent claim 16 specifies an apparatus for automatically providing contingent transfer and execution of one or more spoken language interfaces for a user with respect to at least one external network with which the user interacts. The apparatus includes “a portable spoken language interface device; and a personal data assistant (PDA) operatively coupled to the spoken language interface device, the PDA including at least one application associated therewith.” The portable spoken language interface device is operative to “(i) request a spoken language interface data set from the external network upon discovery of the external network; (ii) receive from the external network the spoken language interface data set; and (iii) load the spoken language

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interface data set into the data structure of the portable spoken language interface device for use by the user interfacing with the external network.”

With regard to claim 16, the Examiner states that “Mozer teaches, all the limitations as stated above in claim 6, however, Mozer fails to teach, ‘a personal data assistant operatively coupled to spoken language interface device” (final Office Action; page 5, paragraph 3). However, the Examiner takes Official Notice and contends that personal data assistants are “well-known” (final Office Action; page 5, paragraph 3). While Appellants agree that Mozer fails to teach a PDA operatively coupled to the spoken language interface device, as required by claim 16, Appellants disagree with the Examiner’s contention that Mozer discloses the limitations recited in claim 6, as stated above in connection with claim 6.

With regard to the Examiner’s taking of official notice, Furthermore, Appellants assert that while PDAs in general may be well-known in the art, while MPEP §2144.03 states that it may be permissible to take office notice in certain rare circumstances, “[o]fficial notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known” (MPEP §2144.03(A); emphasis added). Appellants submit that while PDAs themselves may have been well-known in the art, the precise configuration of coupling a PDA to a portable spoken language interface device in a manner which enables the spoken language interface device to perform the above-noted operations, as set forth in claim 16, is not known. Nor was it obvious to those skilled in the art at the time the invention was made to modify the teachings of Mozer in view of the Examiner’s taking of official notice.

Appellants assert that there exists no motivation or suggestion in the prior art of record to modify the teachings of Mozer in order to obtain the invention set forth in the subject claims. The mere fact that the portable spoken language interface device may be combined with a PDA does not, by itself, render the claimed combination obvious. It is well-settled law that “[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so.” *ACS Hosp. Systems, Inc.*

v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). “Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious “modification” of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Fritch*, 23 USPQ2d 1780, 1783, 1784 (Fed. Cir. 1992). Moreover, the Federal Circuit, in *In re Zurko*, held that:

[T]he Board cannot simply reach conclusions based on its own understanding or experience -- or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings.” *In re Zurko*, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001).

Since Mozer relates to providing inexpensive speech recognition for a dedicated appliance that does not otherwise have such capability (Mozer; Abstract), there is no reason why Mozer would require requesting a spoken language interface data set from an external network, receiving from the external network the spoken language interface data set, and loading the new spoken language interface data set into the data structure of a portable spoken language interface device for use by the user interfacing with the external network, as required by claim 16 of the present invention. Consequently, Appellants submit that the suggestion or motivation to modify Mozer is simply not present.

For at least the foregoing reasons, Appellants assert that claim 16 is patentable over the cited prior art.

Claim 8 depends from claim 6 and is therefore believed to be patentable for at least the reasons set forth in Issue 1 above with respect to claim 6.

Claim 17 depends from claim 16 and is therefore believed to be patentable for at least the reasons set forth above with respect to claim 16.

B. Claim 15

Claim 15 further specifies the step of prompting the user for information, as set forth in claim 13, as including the steps of “storing an internal data set including at least one of a date, a time and

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a number of times which a predetermined procedure of an application is performed; and selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on information included in the internal data set. . .” This feature, which is described in the present specification at least on page 36, lines 1-11 and on page 37, lines 14-17, advantageously allows the system to present a prompt to the user having a level of informational detail that reflects the user’s familiarity with the application being used. Appellants submit that this feature is not taught or suggested by the prior art.

As per claim 15, the Examiner, while acknowledging that Mozer fails to disclose such limitation, takes official notice and contends that it is “well-known” to store a record of date, time and number of times that a predetermined procedure of an application is performed (final Office Action; page 6, paragraph 2). Appellants respectfully disagree with this contention.

While storing a record of the date, time and/or number of times an application is performed may be well-known, the prior art of record fails to teach or suggest a process of selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying degrees of instruction based at least in part on information stored in an internal data set (e.g., reflecting a user’s experience level with the application). As previously stated, MPEP §2144.03 permits the taking of official notice without documentary evidence only in certain rare circumstances in which the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. This is clearly not the case here.

Inasmuch as Mozer provides no such teaching or suggestion, and, moreover, since the Examiner fails to provide a reasonable basis as to where in the prior art, absent the teachings of the present invention, such disclosure exists, Appellants assert that claim 15 is independently patentable.

Issue 3

Appellants hereby re-allege and incorporate by reference the arguments relating to Issues 1 and 2 above in their entirety.

A. Claims 1, 2 and 9

As noted above, claim 1 specifies, in an apparatus for providing a portable spoken language interface for a user to a device in communication with the apparatus, a method for modifying a data structure containing at least one user interface data set. The method includes adding a new application to the device, generating a second user interface data set corresponding to the new application, transferring the second user interface data set from the device to the apparatus, and loading the second user interface data set into the data structure of the apparatus. The second user interface data set represents spoken language interface elements and data recognizable by the new application.

As per claim 1, the Examiner contends that Mozer teaches a method for modifying a data structure containing at least one user interface data set (final Office Action; page 6, paragraph 4). Although the Examiner acknowledges that Mozer and well-known prior art fail to teach various elements of the subject claim, including a spoken language interface apparatus comprising, among other components, a dialog manager and at least one user interface data set coupled to the dialog manager, the Examiner contends that such features are disclosed in Abella (final Office Action ; page 8, paragraph 2). Appellants respectfully disagree with these contentions.

Appellants submit that claim 1 is patentable over the prior art of record, when considered either individually or in combination. Specifically, both Mozer and Abella fail to teach or suggest adding a new application to the device, generating a second user interface data set corresponding to the new application, transferring the second user interface data set from the device to the apparatus, and loading the second user interface data set into a data structure of the apparatus, as expressly set forth in claim 1.

As previously stated in connection with claims 6 and 19, Appellants assert that the recognition set and weight set taught by Mozer, on page 3, paragraph 0032, are not analogous to the spoken language interface data set recited in the claimed invention and defined by the present specification. The recognition set disclosed in Mozer is merely a set of words recognized by the dedicated interface associated with the speech recognition system. While Mozer may disclose that the recognition system can select a new set of words and associated weights for recognizing a new

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user utterance (Mozer; page 3, paragraph 0033), Mozer fails to teach or suggest adding a new application to the speech recognition system. Furthermore, Mozer fails to teach or suggest generating a second user interface data set representing spoken language interface elements and data recognizable by the new application, as required by claim 1. Rather, Mozer discloses a system that is dedicated to a single application (e.g., a compact disc changer application), and thus there is no need to generate a second user interface data set in Mozer.

Like Mozer, the dialogue management techniques disclosed in Abella relate to a single dedicated application running on a system. Abella does not teach or suggest adding a new application to the system. Nor does Abella disclose generating a second user interface data set corresponding to the added application, as required by claim 1. Thus, at least in this respect, Abella fails to supplement the deficiencies of Mozer.

For at least the foregoing reasons, Appellants assert that claim 1 is patentable over the cited prior art.

Claims 2 and 9 depend from claim 1 and are therefore believed to be patentable for at least the reasons set forth above with respect to claim 1.

B. Claims 3-5

Claim 3 further specifies “removing a user interface data set from the data structure.” With regard to claim 3, the Examiner contends that such feature is disclosed in Mozer on page 3, paragraphs 0032 and 0033.

Claims 4 and 5 depend from claim 3 and are therefore believed to be patentable for at least the reasons set forth above with respect to claim 3.

C. Claim 10

Claim 10, like claim 13, further defines the method for modifying a data structure containing at least one user interface data set as prompting the user for information comprising a spoken utterance and the device manager “modifying at least one of a predetermined parameter of the device

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and an application running on the device” in response to the spoken utterance. The prior art of record fails to teach or suggest at least this feature of the claimed invention.

As per claim 10, the Examiner acknowledges that Mozer fails to teach such feature (final Office Action; page 11, paragraph 3), but contends that such feature is taught by Abella at column 7, lines 36-67 (final Office Action; page 11, paragraph 3). Appellants respectfully disagree with this contention. Specifically, at column 7, beginning at line 37, Abella states:

The dialogue manager operates so as to direct a dialogue with a user in an attempt to satisfy a user request. The user request may be a request for a particular piece of information from a database . . . , a command . . . , or any other type of request. Irrespective of the particular task, the dialogue manager is configured to recognize the user request, determine when to initiate a dialogue, and decide what to ask the user so as to process the user request efficiently.

However, while Abella may disclose changing the prompt presented to the user in response to user input, Abella fails to teach or suggest modifying one or more operating parameters of the device and/or modifying the application itself in response to the spoken utterance, as explicitly set forth in claim 10. Thus, Abella fails to supplement the deficiencies of Mozer and “well-known” prior art.

Inasmuch as the prior art of record clearly fails to teach or suggest the above-noted limitations, claim 10 is believed to be independently patentable.

D. Claim 11

Claim 11, like claim 14, further defines the step of prompting the user for information as “storing one or more user experience parameters corresponding to a familiarity of the user with a predetermined procedure of the application; and selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on experience parameters, the selected prompt substantially matching the stored experience parameters of the user.” Appellants submit that the prior art of record clearly fails to teach or suggest at least this feature of the claimed invention.

As per claim 11, the Examiner contends that such feature is disclosed in Mozer on page 3, paragraph 0029 (final Office Action; page 12, paragraph 1). Appellants respectfully disagree with this contention. As noted above in connection with claim 14, Mozer, on page, paragraph 0029 states that “[t]he information presented to the user may include prompts for input to microphone 105 or application specific information.” However, prompting for information corresponding to a particular application, as taught by Mozer, is not reasonably equivalent to providing a plurality of different prompts to the user based on an experience level of the user with the application, as expressly required by claim 11. Mozer fails to teach or suggest modifying the set of prompts presented to the user based on experience parameters, and furthermore fails to teach or suggest any means for determining and storing the familiarity of the user with the particular application, as set forth in the subject claim.

Inasmuch as the prior art clearly fails to teach or suggest the above-noted limitations, claim 11 is believed to be independently patentable.

E. Claim 12

Claim 12, like claim 15, further specifies the step of prompting the user for information, as set forth in claim 13, as including the steps of “storing an internal data set including at least one of a date, a time and a number of times which a predetermined procedure of an application is performed; and selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on information included in the internal data set. . .” Appellants submit that this feature is not taught or suggested by the prior art.

As per claim 12, the Examiner contends that such feature is disclosed in Mozer on page 3, paragraph 0029, where it is stated that “the information presented to the user may include prompts for input to microphone 105 or application specific information” (final Office Action; page 12, paragraph 2). Appellants respectfully disagree with this contention and submit that nowhere does Mozer disclose modifying the user prompts to reflect a familiarity of the user with the particular application procedure. Furthermore, Mozer fails to teach or remotely suggest storing an internal data

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set including a date, time and/or number of times that a predetermined procedure of an application is performed, and selecting the prompt to be presented to the user from a set or prompts based on the stored internal data set, the set of prompts including varying amounts of instruction.

Inasmuch as Mozer fails to teach or suggest the above-noted features of claim 12, Appellants assert that claim 12 is independently patentable.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Wayne L. Ellenbogen". The signature is fluid and cursive, with the first name "Wayne" being the most prominent.

Date: October 21, 2003

Wayne L. Ellenbogen
Attorney for Applicant(s)
Reg. No. 43,602
Ryan, Mason & Lewis, LLP
90 Forest Avenue
Locust Valley, NY 11560
(516) 759-7662

APPENDIX

1. In apparatus for providing a portable spoken language interface for a user to a device in communication with the apparatus, the device having at least one application associated therewith, the spoken language interface apparatus comprising: (A) an audio input system for receiving speech data provided by the user; (B) an audio output system for outputting speech data to the user; (C) a speech recognition engine for generating an output in response to spoken utterances; (D) a speech synthesizing engine for generating a synthesized speech output in response to text data; (E) a dialog manager operatively coupled to the device, the audio input system, the audio output system, the speech recognition engine and the speech synthesizing engine; and (F) at least one user interface data set operatively coupled to the dialog manager, the user interface data set representing spoken language interface elements and data recognizable by the application of the device; wherein: (i) the dialog manager enables connection between the input audio system and the speech recognition engine such that the spoken utterance provided by the user is provided from the input audio system to the speech recognition engine; (ii) the output generated by the speech recognition engine is returned to the dialog manager; (iii) the dialog manager uses the output generated by the speech recognition engine to search the user interface data set for a corresponding spoken language interface element and data which is returned to the dialog manager when found; (iv) the dialog manager provides the spoken language interface element associated data to the application of the device for processing in accordance therewith; (v) the application of the device, on processing that element, provides a reference to an interface element to be spoken; (vi) the dialog manager enables connection between the audio output system and the speech synthesizing engine such that the speech synthesizing engine which, accepting data from that element, generates a synthesized output that expresses that element; and (vii) the audio output system audibly presenting the synthesized output to the user; a method for modifying a data structure containing the at least one user interface data set, comprising:

adding a new application to the device;

generating a second user interface data set in accordance with the new application, the second user interface data set representing spoken language interface elements and data recognizable by the new application;
transferring the second user interface data set from the device to the apparatus; and
loading the second user interface data set into the data structure of the apparatus.

2. The method of claim 1, further comprising the step of audibly notifying the user that the new application is useable via the audio output system.

3. The method of claim 1, further comprising the step of removing a user interface data set from the data structure.

4. The method of claim 3, wherein the user interface data set is removed prior to the loading step in accordance with a least recently used algorithm.

5. The method of claim 3, wherein the user interface data set is in accordance with a request by an application.

6. A method of automatically providing a spoken language interface for a user with respect to at least one external network with which the user interacts, wherein the user possesses a portable spoken language interface device having a data structure for storing one or more user interface data sets used to provide one or more spoken language interfaces, the method comprising the steps of:

the device requesting a spoken language interface data set from the external network upon discovery of the external network;

the external network transferring the spoken language interface data set to the device; and

loading the spoken language interface data set into the data structure of the device for use by the user interfacing with the external network.

7. The method of claim 6, wherein the device is in wireless communications with the external network.

8. The method of claim 6, wherein the device comprises a personal digital assistant.

9. The method of claim 1, wherein the new application comprises a speech aware application, the speech aware application being responsive to user utterances for at least partially interacting with the new application.

10. The method of claim 1, further comprising the step of:
the device prompting the user for information comprising a spoken utterance, the device manager being responsive to the spoken utterance for operatively modifying at least one of a predetermined parameter of the device and an application running on the device.

11. The method of claim 10, wherein the step of prompting the user for information includes the steps of:

storing one or more user experience parameters corresponding to a familiarity of the user with a predetermined procedure of the application; and

selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on experience parameters, the selected prompt substantially matching the stored experience parameters of the user.

12. The method of claim 10, wherein the step of prompting the user for information includes the steps of:

storing an internal data set including at least one of a date, a time and a number of times which a predetermined procedure of an application is performed; and

selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on information included in

the internal data set, the selected prompt substantially matching the stored internal data set.

13. The method of claim 6, further comprising the step of:

the portable spoken language interface device prompting the user for information comprising a spoken utterance, the device being responsive to the spoken utterance for operatively modifying at least one of a predetermined parameter of the device and an application running on the device.

14. The method of claim 13, wherein the step of prompting the user for information includes the steps of:

storing one or more user experience parameters corresponding to a familiarity of the user with a predetermined procedure of the application; and

selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on experience parameters, the selected prompt substantially matching the stored experience parameters of the user.

15. The method of claim 13, wherein the step of prompting the user for information includes the steps of:

storing an internal data set including at least one of a date, a time and a number of times which a predetermined procedure of an application is performed; and

selecting a prompt from a set of prompts for presentation to the user, the set of prompts including varying amounts of instruction based at least in part on information included in the internal data set, the selected prompt substantially matching the stored internal data set.

16. Apparatus for automatically providing contingent transfer and execution of one or more spoken language interfaces for a user with respect to at least one external network with which the user interacts, the apparatus comprising:

a portable spoken language interface device; and

a personal data assistant (PDA) operatively coupled to the spoken language interface device, the PDA including at least one application associated therewith;

wherein the portable spoken language interface device is operative to: (i) request a spoken language interface data set from the external network upon discovery of the external network; (ii) receive from the external network the spoken language interface data set; and (iii) load the spoken language interface data set into the data structure of the portable spoken language interface device for use by the user interfacing with the external network.

17. The apparatus of claim 16, wherein the portable spoken language interface device is in wireless communication with the external network.

18. The apparatus of claim 16, wherein the portable spoken language interface device comprises a personal speech assistant (PSA), the PSA comprising:

an audio input system for receiving speech data provided by the user;

an audio output system for outputting speech data to the user;

a speech decoding engine for generating an output in response to spoken utterances;

a speech synthesizing engine for generating a synthesized speech output in response to text data;

a dialog manager operatively coupled to the device, the audio input system, the audio output system, the speech decoding engine and the speech synthesizing engine; and

at least one user interface data set operatively coupled to the dialog manager, the user interface data set representing spoken language interface elements and data recognizable by the application of the device;

wherein:

the dialog manager enables connection between the input audio system and the speech decoding engine such that the spoken utterance provided by the user is provided from the input audio system to the speech decoding engine;

the output generated by the speech decoding engine is returned to the dialog

manager;

the dialog manager uses the output generated by the speech decoding engine to search the user interface data set for a corresponding spoken language interface element and data which is returned to the dialog manager when found;

the dialog manager provides the spoken language interface element associated data to the application of the device for processing in accordance therewith;

the application of the device, on processing that element, provides a reference to an interface element to be spoken;

the dialog manager enables connection between the audio output system and the speech synthesizing engine such that the speech synthesizing engine which, accepting data from that element, generates a synthesized output that expresses that element; and

the audio output system audibly presents the synthesized output to the user.

19. An article of manufacture for automatically providing a spoken language interface for a user with respect to at least one external network with which the user interacts, wherein the user possesses a portable spoken language interface device having a data structure for storing one or more user interface data sets used to provide one or more spoken language interfaces, comprising a machine readable medium containing one or more programs which when executed implement the steps of:

requesting a spoken language interface data set from the external network upon discovery of the network;

transferring the spoken language interface data set from the external network to the device; and

loading the spoken language interface data set into the data structure of the device for use by the user interfacing with the external network.